REMARKS

Claims 1 - 3 and 6 - 19 are pending. Claims 1, 6, and 13 have been amended. Claims 17 - 19 have been added. Claims 4 - 5 have been cancelled. No new matter has been added. The applicants respectfully request reconsideration and reexamination of the application.

In the June 27, 2005 Office Action, the Examiner rejected claims 1 -4, 6 - 8, 10 - 11, 13 - 14, and 16 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 5,960,391 to Tateishi ("the Tateishi reference"). The Examiner rejected claim 9 under 35 U.S.C. § 103(a) as being unpatentable over the Tateishi reference. The Examiner rejected claims 5, 12, and 15 under 35 U.S.C. § 103(a) as being unpatentable over the Tateishi reference in view of U.S. Patent No. 5,569,038 to Tubman ("the Tubman reference"). These rejections are respectfully traversed in so far as they are applicable to the presently pending claims.

Claim 1, as amended, distinguishes over the cited references. Claims 1, as amended, recites:

> A sound processing method comprising the steps of:
> separating an input audio signal of at least one system into a plurality of separated signal components corresponding respectively to a plurality of different types of sound sources, the input audio signal containing an ambient sound component and an on-the-spot speech sound component, and at least part of the plurality of the separated signal components including the ambient sound component and the on-the-spot speech component;
> **subjecting each of the ambient sound component and the on-the-spot speech component of at the least part of the plurality of separated signal components to individual sound processing suitable for the signal component, the sound processing of the ambient sound component including sound field control processing for creating a spatial impression of sound with a presence**; and
> outputting the plurality of separated signal components as at least one audio signal after each signal component of the at least part thereof

is subjected to the individual sound processing.

The Tateishi reference does not disclose, teach, or suggest the method of claim 1, as amended. The Examiner states that a sound processor (9) of the Tateishi reference subjects each signal component of at least part of the plurality of separated signal components to individual sound processing suitable for the signal component. Specifically, the Tateishi reference is directed to the extraction of one of more signal components from an input signal with accuracy. Even in the case where noises are introduced into speech, the speech signal and the noise signal are extractable with a high accuracy. *(Tateishi, col. 5, lines 38 - 49)*. A signal extraction system 5 is disclosed which includes a microphone 6 for receiving a sound where noise of a traveling motor vehicle is introduced into speech, an amplifier 7 for amplifying the signal outputted from the microphone 6, an A/D converter for performing an A/D conversion of the signal outputted from the amplifier 7, and a neural network arithmetic section 9 for receiving the digital signal from the A/D converter to output a speech signal component and a noise signal component. *(Tateishi, col. 12, lines 55 - 67)*.

This is not the same as a sound processing method including **subjecting each of the ambient sound component and the on-the-spot speech component of at the least part of the plurality of separated signal components to individual sound processing suitable for the signal component, the sound processing of the ambient sound component including sound field control processing for creating a spatial impression of sound with a presence**. It is not the same because the Tateishi reference discloses only the extracting of the noise signal and the speech signal from the input signal and there is no disclosure that each of the speech signal

(which is similar to the on-the-spot speech component of claim 1) and the noise signal (which is similar to the ambient sound component of claim 1) is **subjected to individual or separate sound processing**. In contrast, Figs. 1 and 9 of the Tateishi reference disclose that the signals are extracted by the neural network arithmetic section and then output from the neural network arithmetic section. There is no disclosure of sound processing. The Examiner admits this in stating that the Tateishi reference does not clearly teach a sound field controller that performs sound field control processing on each signal component. *(Office Action, page 6)*.

Further, the Tateishi reference does not disclose that the **sound processing on the ambient component creates a spatial impression of sound with a presence**, as is recited in claim 1. The Tateishi reference does not disclose any sound processing and specifically does not mention that any **sound processing creates a spatial impression of sound with a presence**. Accordingly, applicant respectfully submits that claim 1, as amended, distinguishes over the Tateishi reference.

The Tubman reference does not make up for the deficiencies of the Tateishi reference. The Examiner states that Tubman reference (in Figures 1 and 8 and col. 10, lines 1 - 40) discloses that a sound field controller performs sound field control processing upon each signal component. *(Office Action, page 6)*. The Tubman reference discloses in col. 10, lines 1 - 40, that a system 8 is connected to an output of a mixing console from which a master tape provides audio signal inputs 12, 14, and 16. The operator has mixed the master tape into these audio signal inputs 12, 14, and 16. Input 18 is a vocal message input which is input through microphone as rapidly spoken messages. These inputs are converted to digital signals and applied to four memories.

These digital signal are read out and presented to for D/A converters for outputting the output signals such as AcousticPrompt message 57 and vocal output 59, with the output being the same as the original audio signals 12, 14, 16, and 18 except that the signals have been delayed in time. Further, the Tubman reference in Fig. 8 illustrates a four-channel recording medium playback device 54, where each of the four channels is applied to a mixer 56. The mixer 56 has fader controls for each of the four channels of the karaoke playback device 54, i.e., music, vocal, prompt, and microphone, and adds the four signals together which makes a stereo signal. This stereo signal is applied to the loudspeakers. *(Tubman, Fig. 8, col. 15, lines 22 - 61).*

This is not the same as a sound processing method including **separating an input audio signal of at least one system into a plurality of separated signal components corresponding respectively to a plurality of different types of sound sources, the input audio signal containing an ambient sound component and an on-the-spot speech sound component, and at least part of the plurality of the separated signal components including the ambient sound component and the on-the-spot speech component** and **subjecting each of the ambient sound component and the on-the-spot speech component of at the least part of the plurality of separated signal components to individual sound processing suitable for the signal component, the sound processing of the ambient sound component including sound field control processing for creating a spatial impression of sound with a presence**. The Tubman reference never discloses that the input audio signal is separated into an on-the-spot speech component and an ambient sound component. Further, the Tubman reference does not disclose that each of the ambient

sound component and the on-the-spot speech component is subjected to individual sound processing. The Tubman reference never discusses that an ambient speech component is utilized because its only inputs are music, vocal, prompt, and microphone. Thus, no individual sound processing for the ambient speech component is disclosed because the Tubman reference doesn't disclose a separated out ambient sound component. Assuming, *arguendo*, that the Tubman reference did disclose an ambient sound component , the Tubman reference does not disclose that **the sound processing of the ambient sound component includes sound field control processing for creating a spatial impression of sound with a presence**, as is recited in claim 1, as amended. Accordingly, applicant respectfully submits that claim 1, as amended, distinguishes over the Tubman / Tateishi combination.

Claims 6 and 17 recite limitations similar to claim 1, as amended. Accordingly, applicant respectfully submits that claims 6 and 17 distinguish over the Tubman / Tateishi combination for reasons similar to those discussed above in regard to claim 1, as amended.

Claims 2 - 3, 6 - 14, and 18 - 19 depend, indirectly or directly, on independent claims 1, 6, and 17. Accordingly, claims 2 - 3, 6 - 14, and 18 - 19 distinguish over the Tateishi / Tubman combination for the same reasons as those discussed above in regard to claim 1, as amended.

Claim 9 further distinguishes over the cited references. Claim 9 recites:

> A sound processing apparatus as claimed in claim 6, wherein said signal separator performs spectrum analysis upon said input audio signal to extract a specific signal component, and **subtracts the extracted specific signal component from the input audio signal to obtain a remaining signal component of the input audio signal**.

The Tateishi reference does not disclose the sound processing apparatus of claim 9. The Examiner states that the Tateishi reference in col. 16, line 57 - col. 17, line 13 (which is describing Fig. 8) discloses that performing of spectrum analysis upon the input audio signal. *(Office Action, page 5)*. Specifically, the Tateishi reference discloses that the Fourier transform unit outputs a Fourier spectrum corresponding to two output signals (one being a speech signal component and the second being a noise signal component). *(Tateishi, col. 17, lines 1 - 13)*. The Examiner further states that Fig. 10 teaches that the sound processing apparatus subtracts the extracted specific signal component from the input audio signal to obtain a remaining signal component. While the applicants understand the Examiner's use of Fig. 10 because the noise estimation value is subtracted, Fig. 10 specifically discloses that a weighted mean calculation section 115 receives the noise superimposed aural signal D5 and both the voice estimation value and the noise estimation value. *(Tateishi, co. 19, lines 37 - 47)*. In other words, the result or output of the Tateishi weighted mean calculation section is the weighted mean of the three signals and **not a remaining signal component of the input audio signal, after an extracted signal is subtracted**, as is recited in claim 9. Accordingly, applicant respectfully submits that claim 9 further distinguishes over the Tateishi reference. In addition, applicant respectfully submits that there is no motivation or suggestion to combine Figs. 8 and 10 of the Tateishi reference, as is suggested by the Examiner. Each of Figs. 1, 8, and 10 represent embodiments of the Tateishi reference that are never disclosed to be combinable.

The Tubman reference does not make up for the deficiencies of the Tateishi reference. The Tubman reference does not disclose a sound processing apparatus

including, wherein said signal separator performs spectrum analysis upon said input audio signal to extract a specific signal component, and **subtracts the extracted specific signal component from the input audio signal to obtain a remaining signal component of the input audio signal**. Accordingly, applicant respectfully submits that claim 9 distinguishes over the Tubman / Tateishi combination.

Applicants believe that the claims are in condition for allowance, and a favorable action is respectfully requested. If for any reason the Examiner finds the application other than in condition for allowance, the Examiner is requested to call either of the undersigned attorneys at the Los Angeles telephone number (213) 488-7100 to discuss the steps necessary for placing the application in condition for allowance should the Examiner believe that such a telephone conference would advance prosecution of the application.

Respectfully submitted,

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